

WHAT IS CLAIMED IS:

1. A method for producing nanofibers with an excellent fiber formation property, characterized in that: when nanofibers 3 having a thickness of a nano level are produced by electrostatically spinning a spinning liquid 1 of a polymer resin solution on a collector 8 through a nozzle 2 under a high voltage, a collector 8 with a heater 6 is used as the collector 8.

2. The method of claim 1, wherein the collector with the heater 6 is a laminate element of a three layer structure which is composed of (i) a supporting element 7 which is a lower end surface, (ii) a conductive plate 5 which is an upper end surface, and (iii) a heater 6 of direct heating type located between the supporting element and the conductive plate.

15

3. The method of claim 1 or 2, wherein the heater 6 is a heating plate 6a which has hot wires 6b covered with dielectric polymer arranged at constant intervals and a temperature controller 6c attached thereto.

20

4. The method of claim 1, wherein the heater 6 is a heater indirectly heated by heat transfer medium circulation.

5. The method of claim 1, wherein the collector 8 with the heater 6 is a laminate element of a three layer structure which is composed of (i) a supporting element 7 which is a lower end surface, (ii) a conductive plate 5 which is an upper end surface, and (iii) a heater 6 located between the supporting element and the conductive plate and indirectly heated by heat transfer medium circulation.

6. The method of claim 4 or 5, wherein the heat transfer medium is water, steam or oil.

10

7. The method of claim 1 or 5, wherein the heater 6 is of such a plate type which has a heat transfer medium circulation tube 6e equipped inside and is connected to a circulation type heat reservoir 6d through a heat transfer medium feed section 6f and a heat transfer medium discharge section 6g.

15

8. The method of claim 2 or 5, wherein the conductive plate 5 is made from aluminum, copper or stainless steel.

20

9. The method of claim 2 or 5, wherein the supporting element 7 is made from plastic which is dielectric.

10. The method of claim 3, wherein the dielectric polymer is silicon.

11. The method of claim 1, wherein the electrostatic spinning
5 method is a top-down electrostatic spinning type, a down-top electrostatic spinning type or a horizontal electrostatic spinning type.